

## FACULTY PROFILE

Name of the Staff : **Dr.GENGARAJ.M**  
Official Address with E-mail Id : Assistant Professor (SG)  
Dept. of EEE  
National Engg. College  
Kovilpatti-628 503  
gengaraj@nec.edu.in  
Mobile Number : 9003895217



### 1. Personal Details

Age : 40  
Date of Birth : 21.07.1987  
Sex & Marital Status : Male & Married  
Citizenship : Indian  
Qualification : M.E., Ph.D

Degree	Programme and Specialisation	Class /CGPA	Month & Year of Passing	Institute/University
Ph.D	Power Electronics & Drives	-	March 2023	Anna University, Chennai
M.E	Power Electronics & Drives	8.89 / First class	2013	Francis Xavier Engg College/ Anna University, Chennai
B.E	EEE	78% / First class	2008	Francis Xavier Engg College/ Anna University, Chennai

Date of joining : 03.06.2013  
Present status : Assistant Professor (Senior Grade)  
Professional Experience :

Designation	Institution/ Organization	Period	Nature of Duties
Assistant Professor (SG)	National Engineering college	06.04.2022 to Till date	Academic & Research activities
Asst. Professor	National Engineering college	03.06.2013 to 05.04.2022	Academic activities
Lecturer	SCAD college of Engineering and Technology	01.07.2010 to 01.07.2011	Academic activities

**Courses taught:**

Course Title	U.G. or P.G.
High Voltage Engineering, Power system Analysis, Professional Ethics, Biomedical Instrumentation, Design of Electrical Apparatus, Electronic Devices & Circuits, Electromagnetic field theory, AC rotating Machines, Project Management and Finance, Digital Electronics, Wind and Solar Energy Systems	U.G
Flexible AC transmission system , Condition monitoring for High Voltage Power Apparatus, English for Research Paper writing	PG

**2. Academic Achievements****2.1 Inter National Conference Publications:**

S.No	Title of the Paper	Name of the Conference	Organizer	Month & Year
1.	Power Quality Improvement in Grid-Tied Solar PV Systems Using d-q Control-Based Shunt Active Power Filter	ICOEI 2026	Scad College of Engineering and Technology, Tirunelveli	April 2026
2.	Adaptive Bi-directional Power Converter for Battery SoH monitoring in EV Applications	ICOSEC 2025	Kongunadu Engineering College, Coimbatore	September 2025
3.	Investigation of Multilevel Inverter with Multi-Carrier PWM Techniques for E-Vehicle Applications	ICTMIM 2025	Rohini College of Engineering and Technology, Kanyakumari	April 2025
4	Removal of Interference in Partial Discharge Signals Using Type 2 Fuzzy Logic Controller	I4C 2025	M.S.Ramaiah Institute of Technology, Bangalore	October 2024
5	Internet of Things (IoT) powered Smart Horticulture System	IASICT'24	Karpagam Institute of Technology, Coimbatore	April 2024
6.	Smart Health Care Monitoring and Indoor Occupancy Control System using Arduino	ICECA 2022	RVS Technical Campus, Coimbatore	December 2022
7.	Optimized Parameter selection for Induction Motor using Finite Element Method	ICCCI 2023	Sri Shakthi Engineering and Technology, Coimbatore	April 2023
8.	Fuzzy Logic Controller based Power Factor Correction Converter for Industrial	ICAIS 2022	JCT College of Engineering, Coimbatore	February, 2022

	Applications			
9.	An Investigation on Power factor Enhancement using Bi-Directional Power Converter	ICAIS 2021	JCT College of Engineering, Coimbatore	March, 2021
10.	An investigation on Torque Ripple minimization of Switched Reluctance Motor using Different Power Converter Topologies using Intelligent Techniques.	AISGSC 2019	PSG College of Engineering and Technology, Coimbatore	January,2019
11.	A Comprehensive study of Multilevel inverter fed Switched Reluctance motor for Torque ripple minimization with multicarrier PWM strategies.	ICEES2018	SSN College of Engineering, Chennai	February, 2018
12.	Investigating the Design Parameters of Switched Reluctance Motor using FEA	ICIETET'18	Panimalar Institute of Technology, Chennai	March, 2018
13.	Speed Control of Switched Reluctance motor using FOPID controller.	E <sup>2</sup> IC <sup>2</sup>	Karpagam College of Engineering and Technology	January, 2018
14.	A standalone Photovoltaic system using three port half bridge converter with synchronous rectification	PEDC'13	A.C College Of Engineering & Technology, Karaikudi	March, 2013
15.	Grid Connected Photovoltaic Inverter design using Unipolar SPWM & Bipolar SPWM	NCAECCE'13	Sri Krishna College Of Engineering	April,2013
16.	A Multiport Power Interface between the renewable energy resources and the storage elements	ELCON'13	National Engineering College	March,2013
17.	Modelling of a standalone Photovoltaic system with voltage controller for its battery energy storage element	FTPED'12	PandiayanSaraswathi Engineering College	October,2012
18.	Analysis of Evolutionary Technique Multilevel Inverter in PVMS of micro grid		Francis Xavier Engineering College	December 2011

## 2.2 International Journal Publication

S. No	Title of the Paper	Name of the Journal	Vol. No & Page No.	Month & Year
1.	Mitigation of torque ripple in a switched reluctance motor using an interval	Automatika (IF: 1.7)	Volume 66, Issue No : 4 1009-1026	Nov 2025

	type II fuzzy controller			
2.	Internet of Things (IoT) powered Smart Horticulture System	International Journal of Research And Analytical Reviews	11(2) 331-335	June 2024
3.	Investigation on torque sharing function for torque ripple minimization of switched reluctance motor: A flower pollination algorithm based approach',	IETE Journal of Research (IF:1.877)	Vol No: 69 Issue No: 6 3678-3692	Aug 2023
4.	An enhanced control method for torque ripple minimization of switched reluctance motor using hybrid technique	Journal of Intelligent & Fuzzy Systems (IF: 1.72)	Vol. 43, no. 1, pp. 1481-1504 DOI: 10.3233/JIFS-212519	June 2022
5.	Performance enhancement of SRM using smart bacterial foraging optimization algorithm-based speed and current PID controllers	Computers & Electrical Engineering (IF: 3.818)	95-107398	October 2021
6.	PSO Based Torque Ripple Minimization of Switched Reluctance Motor Using FPGA Controller	Intelligent Automation and Soft Computing (IF:1.647)	29, 2, 451-465	January 2021
7.	Enhancement of Women Safety using RASHPERRY PI	International Journal of Innovative Technology and Exploring Engineering	ISSN:2278-3075,Volume-9, Issue-7,	May2020
8.	Harmonics mitigation techniques in renewable energy systems using SAPF	International Journal of Innovative Technology and Exploring Engineering	ISSN: 2778-3075, Volume-9 Issue-5,	March 2020
9.	Optimal generation of output torque for industrial motors using variable frequency drive and gear box drive	International Journal of Recent Technology and Engineering (IJRTE)	ISSN: 2277-3878, Volume-8 Issue-4,	November 2019
10.	Modelling of a standalone Photovoltaic system with voltage controller for its battery energy storage element	International Journal of Electrical Engineering	Volume No: 6 Number:2	2013

**Short term Courses / Seminars / Conference/ Workshops Attended:**

S.No	Title	Period	venue
1.	FDP on “Emerging Technologies With Hands On and Live Demo”	11.11.2014 to 15.11.2014 [5 Days]	National Engineering College, Kovilpatti
2.	DST sponsored “Empowering Indian Engineering Education for Global Expectations”	07.11.2014 to 08.11.2014	National Engineering College, Kovilpatti
3.	Anna University Sponsored FDP on “Power Electronics”	04/06/2015 to 10/06/2015	College of Engineering, Anna University, Chennai
4.	Workshop on “Hands on training on MATLAB toolboxes” – HTMT’16	03. 03. 2016 & 04. 03. 2016	National Engineering College, Kovilpatti
5.	Workshop on, “Implementation of Soft Computing Techniques using MATLAB – ISCT’16	3 days	National Engineering College, Kovilpatti
6.	Two days workshop on, “Hardware in the loop simulation for Power electronics and Control applications using LabVIEW	2 days	Mepco Schlenk Engineering College, Sivakasi
7.	Training on teaching learning skills	22 <sup>nd</sup> May to 27 <sup>th</sup> May 2017	NITTTRC, Chennai
8.	Technology enabled learning	28 <sup>th</sup> May to 30 <sup>th</sup> May 2017	NITTTRC, Chennai
9.	Two week AICTE Sponsored FDP on “Recent Developments in modeling, design and control of power converters and drives.”	13 <sup>th</sup> Nov to 25 <sup>th</sup> Nov 2017	Mepco Schlenk Engineering College, Sivakasi
10.	One Week QIP short term Course on “Power semiconductor devices on power converters”	23 <sup>rd</sup> July to 27 <sup>th</sup> July 2018.	IISc, Bangalore
11	One Week QIP short term Course on “FPGA based Controller design for Power Electronic Converters”	10 <sup>th</sup> June to 14 <sup>th</sup> June 2019.	IISc, Bangalore
12.	One Week Short term course on “ PCB Design using Open Source Tools”	26 <sup>th</sup> October 2020 to 30 <sup>th</sup> October 2020	NIT, Karnataka
13.	Fuzzy Sets, Logic and Systems & Applications	Jan-Apr 2021	IIT , Kanpur
14.	Python for Data Science	Jul – Aug 2022	IIT, Madras
15	MATLAB Fundamentals, Machine Learning with MATLAB	16.02.2023 & 17.02.2023	National Engineering College, Kovilpatti
16	Artificial Intelligence and Machine learning applications	01.07.2023 - 10.07.2023	NIT Warangal

17	Design Thinking – A Primer	July – Sep 2023	IIT Madras
18	Machine Learning and Generative AI	22.07.2024 to 01.08.2024	NIT Warangal
19	Inculcating Universal Human Values in Technical Education	05.08.2024 to 19.08.2024	AICTE
20	Introduction to Soft Computing	Jan – Mar 2025	IIT Madras
21	Power Electronics Applications in Renewable Energy System and E-Vehicles	22.04.2025 to 27.04.2025	IIITDM, Kancheepuram
22	Advance Power Electronics and Control	July – Sep 2024	IIT Roorkee
23	Insights of Intelligent Electrical Drives	15.09.2025 to 20.09.2025	NIT, Trichy

### 2.3 Online Certification Completed:

S. No	Certification	Period	Organizers	Remarks
1.	NPTEL Online Certification on “Introduction to Research”	January-February 2016 (10 Hours)	Indian Institute of Technology (IIT), Madras	Elite Certified
2.	NPTEL Online Certification on “Electrical Machines”	July - October 2017 (12 Hours)	Indian Institute of Technology (IIT), Kharakpur	Elite Certified
3.	Coursera Certificate on “Introduction on Power Electronics”	December 2018	University of Colaroda	Scored 78.5%
4.	MATLAB Online course on “Deep Learning Onramp”	Sep 2019	MATHWORKS, Training services	100%
5.	Coursera Certificate on “Electric Power System”	April 2020	The state University of Newyork	-
6.	MATLAB Online course on “Machine Learning Onramp”	April 2020	MATHWORKS, Training services	100%
7.	MATLAB Online course on “MATLAB Programming Techniques”	May 2020	MATHWORKS, Training services	100%
8.	MATLAB Online course on “ Machine Learning with MATLAB”	June 2020	MATHWORKS, Training services	100%

9.	NPTEL certificate on “Ethics in Engineering Practice”	Jan – Apr 2020 (8 week course)	Indian Institute of Technology (IIT), Madras	100%
10.	NPTEL certificate on “Fuzzy Sets, Logic and Systems & Applications”	Jan-Apr 2021 (12 Week Course)	IIT , Kanpur	Elite Certified
11.	Coursera certificate on “Exploratory Data Analysis with MATLAB”	July 2021	Coursera	100%
12.	NPTEL Certificate on “Python for Data Science”	Jul – Aug 2022	Indian Institute of Technology (IIT), Madras	64%
13.	NPTEL Certificate on “Design Thinking – A Primer”	July – Sep 2023	IIT Madras	78% Elite + Silver
14.	NPTEL Certificate on “Digital Circuits”	Jul –Oct 2024	IIT, Kharakpur	58%
15.	NPTEL Certificate on “Introduction to Soft Computing”	Jan – Mar 2025	IIT, Kharakpur	84% Elite + Silver
16.	NPTEL Certificate on “Advance Power Electronics and Control”	Jul – Sep 2025	IIT, Roorkee	70%
17.	NPTEL Certificate on “Effective Engineering Teaching in Practice”	Jan – Mar 2026	IIT Madras	90% Elite + Gold 2% Topper

#### 2.4 Industrial Training Attended:

S. No	Training Details	Period	Company Details
1.	Faculty Internship Training on Industrial drives	02 <sup>th</sup> – 06 <sup>th</sup> May 2017	CRI Pumps Private limited, Coimbatore
2.	Faculty Internship Training on Embedded systems	23 <sup>rd</sup> – 27 <sup>th</sup> October 2018	Enthu Technologies Private limited, Coimbatore
3.	Industry Know How Programme on Role of Power Electronics in Renewable Energy System	01 <sup>st</sup> -05 <sup>th</sup> March 2021	33kV/11kV TANGEDCO, (MEDC) Kallikudi Substation, Thirumangalam.
4.	Industry Knowhow Programme at Mohan Power Infrastructure Private Limited, Tirunelveli	24 <sup>th</sup> Febraury – 01 <sup>st</sup> March 2022	100 MW Solar Power plant (NLC), Alankulam
5.	Data Patterns Private Limited, Chennai	25 <sup>th</sup> March 2024 – 29 <sup>th</sup> March 2024	Integrated Defence and Aerospace electronics solutions
6.	Industry Knowhow at two days in Chennai core companies	28.08.2025 & 29.08.2025	Data Patterns, Avalon Technologies, Electroavast Solutions, Recenergy India Private

			Limited, Welmech Engineering Private Limited, Chennai
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### 2.5 Event Organized:

S. No	Title of the Webinar/ Event	Date	Participants
1	Co-Coordinator for Two days workshop on " Implementation of soft Computing Techniques"	25/01/2019 & 26/01/2019	33
2.	Co-Coordinator for Three day workshop on " Implementation of soft Computing Techniques"	05/08/2015, 06/08/2015 & 07/08/2015	40

### 2.6 Consultancy:

S. No	Title of the Work	Company	Amount
1	Analysis of output torque of Gear reduction and VFD	Apex, Coimbatore	25,000/-

### 2.6 Seed Money:

S. No	Title of the Work	Company	Amount
1	Smart Dairy Tracker (2023-2024)	NEC NEWGEN	1,00,000/-

### 3. Membership in Professional bodies :

Name of Society	Grade of Membership
ISTE	Life Member

### 4. Additional Responsibilities held

- Department Placement Co-ordinator
- Social Media In-charge(dept)
- Aptitude Forum
- Tutor
- Power Electronics & Drive Lab In charge
- Discipline Committee